

II. REMARKS

Preliminary Remarks

Claims 1 to 7 are pending of which claim 1 is independent. Claim 1 is amended to melt processable copolymers at an extrusion rate higher than 800 m/minute, formed by TFE and FMVE, having Melt Flow Index (MFI) (ASTM D 1238) from 8 g/10 min to 50 g/10 min obtained by using in the polymerization step a chain transfer agent in an amount so to obtain the above MFI, having mechanical properties unchanged after thermal aging for 7 days at 232°C, said copolymers having the following composition: FMVE in per cent by moles from 3.7% to 5.2%; the percent TFE moles being the complement to 100% of the FMVE moles. Support for the claim amendments can be found in the specification as originally filed (see, for example, page 6, lines 7 to 9; page 7, lines 4 to 8; and page 11, lines 5 to 8). Therefore, the applicants believe that no new matter is added.

The applicants respectfully request entry of this response pursuant to 37 C.F.R. §1.116, in that if the examiner maintains the claim rejections, this response places the claims in better form for appeal. The response is filed within the shortened statutory period for response and is accompanied by a Declaration under 37 C.F.R. §1.132 by Giulio Brinate, a Petition for a one-month extension of time, and a check for the extension of time fee under 37 C.F.R. §1.17(a)(1). The applicants respectfully request reconsideration and allowance of the present application.

Patentability Remarks

Rejection under 35 U.S.C. §103 –

Claims 1, 2, 6 and 7 were rejected under 35 U.S.C. §102(b) as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over, Pucciariello (*J. Applied Polymer Sci.* **64**, 407-409, 1997). The applicants respectfully traverse in view of the preceding claim amendments, succeeding remarks, and the enclosed Declaration under 37 C.F.R. §1.132.

The examiner recognizes that the copolymers of Pucciariello may have a higher molecular weight (which would induce a lower MFI) since Pucciariello does not use or suggest using a chain transfer agent in its polymerization process. However, the examiner states that the use of a chain transfer agent, and the properties of the copolymer, are not recited in claim 1 and, moreover, it would have been obvious to use a chain transfer agent since it is commonly used in the art to control molecular weight.

In view of the amendments to claim 1, the applicants respectfully submit that claims 1, 2, 6 and 7 are not anticipated or obvious in view of Pucciariello. As acknowledged by the examiner, Pucciariello does not disclose or suggest a polymerization process that uses a chain transfer agent. Pucciariello also does not disclose or suggest melt processable copolymers having a Melt Flow Index (MFI) (ASTM D 1238) from 8 g/10 min to 50 g/10 min obtained by using in the polymerization step a chain transfer agent in an amount so to obtain the above MFI, having mechanical properties unchanged after thermal aging for 7 days at 232°C (as claimed in amended independent claim 1). Thus, for at least these reasons, Pucciariello does not disclose each and every element of the presently claimed invention as required to establish a *prima facie* case of anticipation or obviousness.

Furthermore, the applicants respectfully assert that it would not have been obvious for one skilled in the art to use a chain transfer agent to control molecular weight and arrive at the present invention. The melt processable copolymers of the present invention solve the technical problem of providing a fluorinated polymer that has a combination of improved extrusion rate and electric insulation. The applicants submit herewith a Declaration under 37 C.F.R. §1.132 that contains Comparative Examples A and B, with an MFI lower and higher than the presently claimed range of 8-50 g/min. Both copolymers A and B were obtained with the same equipment and methods as that in Examples 1, 3, 4 and 7 of the specification, except the amount of chain transfer agent was chosen to obtain an MFI of 6 g/10 min in copolymer A and an MFI of 55 g/10 min in copolymer B.

As described in the Declaration, copolymers with an MFI outside the claimed invention are not suitable for solving the technical problem of providing a fluorinated

polymer usable for LAN cables, prepared by melt extrusion at a rate higher than 800 m/minute, combined with improved electric insulation and stable mechanical properties after thermal aging.

In other words, Comparative Examples A and B clearly show that the above technical problem can be solved only with co-polymers as defined in claim 1. In particular, having an MFI between 8 and 50 g/10 min combined with a FMVE content between 3.7 and 5.2% by moles, and showing the maintenance of mechanical properties after thermal aging for 7 days at 232°C, according to the UL 444 standard. Thus, it would not be obvious for one skilled in the art to simply add a chain transfer agent and arrive at the present invention.

The applicants respectfully submit that claims 1, 2, 6 and 7 are neither anticipated, or in the alternative, obvious, over Pucciariello and respectfully request withdrawal of this rejection.

Claims 3 to 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pucciariello in view of Abulseme *et al.* (U.S. Pat. No. 5,463,006). The applicants respectfully traverse in view of the preceding claim amendments and succeeding remarks.

For at least the reasons set forth above, Pucciariello does not set forth a *prima facie* case of obviousness with respect to claim 1. The addition of Abulseme *et al.* do not cure the deficiencies with respect to claim 1. Since claims 3-5 depend from claim 1, for at least the same reasons, these dependent claims are also not obvious in view of Pucciariello and Abulseme.

Furthermore, the only example in Abulseme *et al.* that shows a dipolymer similar to the presently claimed dipolymers is provided in Comparative Example 4. This Comparative Example, however, shows that the dipolymer has inferior mechanical properties as compared to terpolymers. In particular, Table 1 of Abulseme *et al.* discloses that the MFI of the dipolymer is 7 g/10 min and the composition is 4.6% by weight corresponding to 2.8% by moles of FMVE. Therefore, Abulseme *et al.*'s comparative Example 4 is outside the presently claimed composition and MFI ranges.

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The applicants respectfully submit that Abulseme *et al.* teach away from the presently claimed invention. Therefore, claims 3 to 5 are not unpatentable over Pucciariello in view of Abulseme *et al.* and the applicants respectfully request withdrawal of this rejection.

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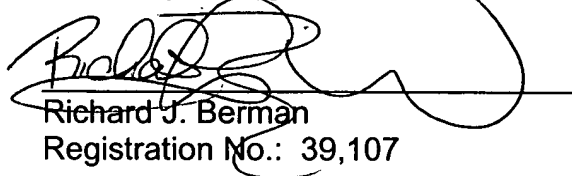
III. CONCLUSION

In view of the amendments and remarks above, and the Declaration under 37 C.F.R. §1.132 submitted herewith, the applicants respectfully submit that this application is in condition for allowance and request favorable action thereon.

In the event this response is not timely filed, the applicants hereby petition for an appropriate extension of time. The fee for this extension, along with additional fees required, may be charged to Deposit Account No. 01-2300, referencing Attorney Docket No. 108910-00110.

Respectfully submitted,

ARENT FOX PLLC



Richard J. Berman
Registration No.: 39,107

Customer No.: **004372**

1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5339

Telephone No.: 202-857-6000
Facsimile No.: 202-857-6395

RJB/GP